12GC6

Beam Power Tube

With Heater Having Controlled Warm-Up Time

GENERAL DATA

Electrical:

Heater, for Unipotential Cathode:		
Voltage (AC or DC)	12.6	volts
Current	0.6 ± 6%	amp
Warm-up time (Average)	11	sec
Direct Interelectrode Capacitances:[a]		
Grid No.1 to plate	0.55	μμf
Grid No.1 to cathode, grid No.3, grid No.2, and heater	15	μμf
Plate to cathode, grid No.3, grid No.2, and heater	7	μμf

Characteristics, Class A_1 Amplifier:

Plate Voltage	60	250	volts
Grid-No.2 Voltage	150	150	volts
Grid-No.1 Voltage	0	-22.5	volts
Triode Amplification Factor for plate volts = grid-No.2 volts = 150	-	4.1	
Plate Resistance (Approx.)	-	20000	ohms
Transconductance	-	6600	μmhos
Plate Current	345[b]	75	ma
Grid-No.2 Current	30[b]	2.4	ma
Grid-No.1 Voltage (Approx.) for plate ma. = 1	-	-46	volts
Grid-No.1 Voltage (Approx.) for peak positive-pulse plate volts = 5000, grid-No.2 volts = 150, and plate ma. = 1	-	-100	volts

Mechanical:

Operating Position	Any
Maximum Overall Length	4-1/4"
Seated Length	3-1/2" ± 3/16"
Maximum Diameter	1-9/16"
Bulb	T12
Cap	Skirted Miniature (JEDEC No.C1-3)
Base	Short Medium-Shell Octal 6-Pin with External Barriers, Arrangement 2, Style B, (JEDEC Group 1, No.B6-122)
Basing Designation for BOTTOM VIEW	8JX

Pin 2 - Heater
Pin 3 - Cathode, Grid No.3
Pin 4 - Grid No.2

Pin 5 - Grid No.1
Pin 7 - Heater
Pin 8 - Grid No.2
Cap - Plate



HORIZONTAL-DEFLECTION AMPLIFIER

Maximum Ratings, ***Design-Maximum Values:***

For operation in a 525-line, 30-frame system[c]

DC PLATE VOLTAGE	770	max.	volts
PEAK POSITIVE-PULSE PLATE VOLTAGE[d]	6500	max.	volts
PEAK NEGATIVE-PULSE PLATE VOLTAGE	1500	max.	volts
DC GRID-No.2 (SCREEN-GRID) VOLTAGE	220	max.	volts
PEAK NEGATIVE-PULSE GRID-No.1 VOLTAGE	330	max.	volts
CATHODE CURRENT:			
Peak	550	max.	ma
Average	175	max.	ma
GRID-No.2 INPUT	4.5	max.	watts
PLATE DISSIPATION[e]	17.5	max.	watts
PEAK HEATER-CATHODE VOLTAGE:			
Heater negative with respect to cathode	200	max.	volts
Heater positive with respect to cathode	200[f]	max.	volts
BULB TEMPERATURE (At hottest point on bulb surface)	220	max.	°C

Maximum Circuit Values:

Grid-No.1-Circuit Resistance	1	max.	megohm

[a] Without external shield.

[b] This value can be measured by a method involving a recurrent wave form such that the maximum ratings of the tube will not be exceeded.

[c] As described in "Standards of Good Engineering Practice Concerning Television Broadcast Stations," Federal Communications Commission.

[d] This rating is applicable where the duration of the voltage pulse does not exceed 15 per cent of one horizontal scanning cycle. In a 525-line, 30-frame system, 15 per cent of one horizontal scanning cycle is 10 microseconds.

[e] An adequate bias resistor or other means is required to protect the tube in the absence of excitation.

[f] The dc component must not exceed 100 volts.